THE BRITISH VETERINARY JOURNAL

VOLUME 132
1976

LONDON: BAILLIÈRE TINDALL

AUTHOR INDEX

ABU ALI, N., 416
Aitken, M. M., 119
Anderson, J. C., 229
Andrews, A. H., 9

BALL, P. J. H., 497
Bareham, J. R., 152
Bechar, G., 318
Bell, F. R., 346
Bernstein, S., 318
Bertram Shaw, W., 18, 143
Bienfet, V., 178
Bishop, C. A., 529
Blackburn, N. K., 423
Bond, C. P., 529
Booth, J. M., 518
Bouters, R., 615
Boyd, J. S., 354
Brone, E., 615
Bulman, D. C., 507
Bush, B. M., 632

CHRISTIANSEN, J., 66
Corbel, M. J., 121, 266

DALTON, R. G., 259
Davies, D. C., 369
De Keyser, P., 615
Dennis, M. J., 369
Döbereiner, J., 28
Dobson, H., 538
Done, J. T., 202
Done, S. H., 28, 380

ECONOMIDES, S. J., 576
Ellendorff, F., 543
Elsaesser, F., 543
El Refaii, A. H., 363
Everett, G., 50

FISHER, E. W., 39, 127, 252
Fitzpatrick, R. J., 538
Fourbet J. F., 477

GADSBY, J. E., 445
Gibson, T. E., 50
Gordin, S., 318
Greer, D. O., 588
Günzler. O., 469

HALL, G. A., 60, 119
Halliday, W. G., 401
Hamburger, R., 469
Hansen, L. A., 66
Heap, R. B., 445
Hebert, C. N., 202
Hemsley, L. A., 86
Henderson, W. M., 3, 136, 246
Hill, R., 380
Hillidge, C. J., 405
Hoare, M. N., 369
Hoffman, B., 469
Holdsworth, R. J., 445, 518
Hope Cawdery, M. J., 568
Hudson, E. B., 95
Hudson, S., 551
Hughes, D. L., 119
Hussani, S. N., 621

IMBABI, S. E., 627
Isayama, Y., 112

JONES, J. E. T., 163, 276
Jones, P. W., 60, 119, 284
Jones, R. S., 226
Judson, G. J., 428

KARSTAD, L., 393
Kiley, M., 323
Korneeva, V. I., 182
Kruger, J. M., 172

LAING, J. A., 445, 534
Lamming, G. E., 507
Leaver, J. D., 497
Leech, F. B., 335
Lees, P., 405
Little, T. W. A., 609
Littlejohn, A., 172
Lodge, J. R., 487
Lomba, F., 178

MACARTHUR, J. A., 609
McGovern, P. T., 68
MacKintosh, C. G., 609
McKnight, I. J., 81, 209
MacPherson, A., 294
Mahgoub, El Sheik, 627
Maltseva, N. N., 182
Majzlik, I., 497
Marangos, A. G., 380
Marennikova, S. S., 182
Martinez, A. A., 39, 127, 252
Masiga, W. N., 187
Mason, R. W., 374
Meirom, R., 39, 252
Meyer, J. N., 543
Michael, S. A., 363
Miller, T. B. 576
Moon, F. E., 294
Movsesijan, M., 416
Muk, T. Abu-Samra, 627
Mullard, M., 551
Mushi, E. Z., 393

NAZER, A. H. K., 192

OSBORNE, A. D., 192

PAREZ, M., 477
Payne, E., 551
Pearson, J. A., 86
Pearson, J. K. L., 588
Pennington, J. A., 487
Pollock, D. A., 588
Pope, G. S., 497
Pownall, R., 259
Pratt, G., 576
Prentice, D. E., 226

RATHORE, A. K., 90, 389
Richardson, C., 202
Roberts, C., 529
Roberts, R. J., 81, 209
Ross, J. G., 401
Rowe, L., 393
Rweyemumu, M. M., 393

SCHMIDT, W., 469
Scott, W. A., 313
Serrano, L., 405
Shimizu, Y., 112
Sojka, W. J., 95
Sokolić, A., 416
Spahr, S. L., 487
Spratling, F. R., 557
Stockdale, P. H. G., 595
Stuart, P., 609
Swanepoel, R., 423

TAFFS, L. F., 105
Takahashi, K., 112
Tanielian, Z., 416
Thibier, M., 477
Thomas, E. L., 121
Tokarnia, C. H., 28
Toofanian, F., 215
Topps, J. H., 576
Trainin, Z., 39, 252

VAN AERT, A., 615
Vandeplasche, M., 615
Voss, R. C., 294

WALTERS, D. E., 445, 465
Wellemans, G., 178
Whittlestone, W. G., 551
Williams, B. M., 221, 309
Wilson, A., 423
Wilson, P. S., 428
Windsor, R. S., 313

YAMASHITA, S., 112

ZIV, G., 318

SUBJECT INDEX

ANAESTHESIA, influence of azoperone/metomidate, on blood biochemistry in the horse, 405
Animal production, disease handicap, 3, 136, 246
Antibiotics, binding of, to dry udder secretion and to udder tissue homogenates, 318

BADGER (*Meles meles*), immobilization of, 609
Behaviour of lambs on first day after birth, 152
Behavioural problems of agricultural animals, a survey, 323
Birth, behaviour of lambs on first day after, 152
Blood biochemistry in the horse, influence of azoperone/metomidate anaesthesia on, 405
Blood sampling, a technique for arterial and mixed venous, in working saddle horses, 172
Blood chemistry in Scotland, surveys of bovine II, serum proteins, cholesterol, calcium, sodium, potassium and magnesium, 401

Book Reviews:
Canine orthopaedics (W. G. Whittick), 437
Coccidia and coccidiosis (L. P. Pellard), 332
Diseases of sheep (R. Jensen), 437
Equine infectious diseases III (ed. J. T. Bryans & H. Gerber), 437
Horse shoeing, principles of, (D. Butler), 118
International zoo yearbook 14 (ed. N. Duplaix-Hall), 333
The ovary and reproductive cycle of the dog (A. C. Anderson & M. E. Simpson), 332
Reproduction in farm animals (E. S. E. Hafez), 437
Scientific papers in English, writing, (M. O'Connor & F. P. Woodford), 118
Veterinary pathology (H. A. Smith, T. C. Jones & R. D. Hunt), 437
Veterinary reproduction and obstetrics (G. H. Arthur), 437
Border disease, experimental, in sheep, dose-respnse effect, 202

Brucella abortus infection in sheep I, 18
Brucella abortus infection in sheep II, experimental infection of ewes, 143
Brucella abortus strain 19, *in vivo* activity of a smooth phage-resistant variant, of, 121
Brucella strains, determination of *in vitro* sensitivity to rifampicin, 266

Calves:
complex nutritional deficiency in a group of, 557
derivation of gnotobiotic, by a hysterotomy and slaughter technique, 369
effect of level of feeding and of single versus double suckling on milk production and weight changes of the suckler cow and on growth of the calf, 576
neonatal diarrhoea IV, serum and faecal immune globulins in neonatal salmonellosis, 39
neonatal diarrhoea V, water balances in calves with mixed infections, 127
neonatal diarrhoea VI, serum and faecal immune globulin in calves with mixed infections, 252
plasma corticoid levels in healthy and diarrhoeic, from birth to 20 days of age, 551
salmonella infection and contamination of veal, a slaughterhouse survey, 192
simplified apparatus for the microbiological isolation of, 642
small intestine infusion studies, 215
Cambendazole, the effect of oral, against 10-day-old *Hyostrongylus rubidus* and *oesophagostomum* spp. larvae in experimentally infected pigs, 105
Campylobacter fetus—antibodies in preputial secretions of a vaccinated bull, nature of, 615
Cattle:
application of imidocarb diproprionate for control of *Theileria annulata* infection in Egyptian cattle used for testing rindepest vaccine, 363
Campylobacter fetus—antibodies in preputial secretions of a vaccinated, bull, nature of, 615
comparison of methods for demonstrating antibodies to virus of infectious bovine rhinotracheitis/infectious pustular vulvovaginitis, 423
cultural and serological study of cattle vaccinated twice with *Mycoplasma* sub-species *mycoides*, 187
Dermatophilus congolensis, bacteriological, *in vitro* antibiotic sensitivity and histopathological study of natural infection in Sudanese, 627
effect of fascioliasis on susceptibility of, to *Salmonella dublin*, 119
effect of level of feeding and of single versus double suckling on milk production and weight changes of the suckler cow and on growth of the calf, 576
effect of temperature, solids content and pH on survival of salmonellas in slurry, 284
experimental study of *Salmonella dublin* abortion in, 60
factors affecting progesterone in milk for pregnancy diagnosis in, 487
glutathione peroxidase activity in bovine and ovine erythrocytes in relation to blood selenium concentration, 428
IBR virus and occurrence of metritis at parturition in Belgian Blue White breed, 178
mechanisms of staphylococcal virulence in relation to bovine mastitis, 229
milk progesterone as a parameter for fertility control in Germany, 469
milk progesterone radioimmunoassay in the diagnosis and treatment of subfertility in dairy cows, the use of, 507
non-pregnancy in cattle, early diagnosis: a commercial service, 529
persistent infection of, with herpesvirus of malignant catarrhal fever and observations on pathogenesis of the disease, 393
pregnancy diagnosis in the cow from milk progesterone concentration, 445
pregnancy testing, the establishment and operation of central laboratory for, 518
progesterone concentrations in plasma and milk in the diagnosis of pregnancy in domestic, 497
serological response to indirect fluorescent antibody test of, infected with *Theileria sergenti*, 112
sources of variation in milk flow rate and its relationship with milk yield, milk composition, age and stage of lactation in dairy cows, 90
surveys of bovine blood chemistry in Scotland II; Serum proteins, cholesterol, calcium, sodium, potassium and magnesium, 401
systemic connective tissue calcification, poisoned by *Solanum malacoxylon*, histological study, 28
visual and radiographic examination of mandibular cheek teeth and their relationship to age in Aberdeen Angus x Friesian steers, 9
Cerebrocortical necrosis, biochemical aspects of cobalt deficiency in sheep with special reference to vitamin status and a possible involvement in the aetiology of, 294
Chickens:
irradiated *Eimeria brunetti*, *E. necatrix* and *E. tenella* in the simultaneous immunization in, 416
liver biotin and palmitoleic acid levels in fatty liver and kidney syndrome of, 86
Cobalt deficiency, biochemical aspects of in sheep with special reference to vitamin status and a possible involvement in aetiology of cerebrocortical necrosis, 294
Connective tissue calcification, systemic, in cattle poisoned by *Solanum malacoxylon*, a histological study, 28
Cow pox virus, in giant ant-eater similar to, 182
Dermatophilus congolensis, bacteriological, *in vitro* antibiotic sensitivity and histopathological study of natural infection in Sudanese cattle, 627
Diarrhoea, neonatal calf IV, serum and faecal immune globulins in neonatal salmonellosis, 39
Diarrhoea, neonatal calf V, water balances in calves with mixed infections, 127
Diarrhoea, neonatal calf VI, serum and faecal immune globulin in calves with mixed infections, 252
Diarrhoeic calves from birth to 20 days of age, plasma corticoid levels in healthy and, 551
Disease handicap to animal production, 3, 136, 246
Dog, review of the aetiology and consequences of urinary tract infections in, 632
Drug resistance in salmonella isolated from animals in England and Wales during 1972, a survey, 95
Drugs, a technique for the investigation of action of, on neuromuscular junction in the intact horse, 226

Ecology of the free living stages of *Haemonchus contortus*, 50
Editorial, 1, 125, 227, 333, 443,
Eimeria brunetti, *E. necatrix* and *E. tenella*, irradiated, in the simultaneous immunization in chickens, 416
Elephants, African in captivity, fascioliasis and salmonellosis in, 313
Epidemiology survey on Welsh farms, infectious necrotic hepatitis of sheep, 221

Fascioliasis and salmonellosis in African elephants in captivity, 313
Fascioliasis, effect of on susceptibility of cattle to *Salmonella dublin*, 119
Fascioliasis, effects of on ewe fertility, 568
Fatty liver and kidney syndrome of chickens, palmitoleic acid and liver biotin levels in, 86
Feline skull, radiological studies on the developing, 354
Fertility control in cattle in Germany, milk progesterone as a parameter for, 469
Fertility, effects of fascioliasis on ewe, 568

Germany, milk progesterone as a parameter for fertility control in cattle in, 469
Giant ant-eaters, pox due to agent similar to cow pox virus, 182
Gnotobiotic calves, derivation of by a hysterotomy and slaughter technique, 369
Glutathione peroxidase activity in bovine and ovine erythrocytes in relation to blood selenium concentration, 428

Haemonchus contortus, ecology of the free living stages of, 50
Hepatitis, infectious, necrotic, of sheep; an epidemiology survey on Welsh farms, 221
Herpesvirus of malignant catarrhal fever, persistant infection of cattle with, and observations on pathogenesis of the disease, 393
Horse:
influence of azoperone/metomidate anaesthesia on blood biochemistry in the, 405
technique for arterial and mixed venous blood sampling in working saddle horses, 172
technique for the investigation of action of drugs on neuromuscular junction, 226
Hybrid sterility, barriers to interspecific hybridization in domestic and laboratory mammals, II, 68
Hyostrongylus rubidus and *oesophagostomum* spp. larvae, the effect of oral cambendazole against 10-day-old, in experimentally infected pigs, 105
Hysterotomy and slaughter technique, derivation of gnotobiotic calves, 369

IBR virus and occurrence of metritis at parturition in the bovine Belgian Blue White breed, 178
Imidocarb diproprionate, application of for control of *Theileria annulata* infection in Egyptian cattle used for testing rindepest vaccine, 363
Immune globulins, serum and faecal, in neonatal salmonellosis, neonatal calf diarrhoea IV, 39
Immune globulins in calves with mixed infections, serum and faecal, neonatal calf diarrhoea VI, 252
Indirect fluorescent antibody test for cattle infected with *Theileria sergenti*, serological response to, 112
Infectious pancreatic necrosis, pathology of I, sequential histopathology of the naturally occuring condition, 81
Infertility, progesterone assays of milk and the control of, 534
Interspecific hybridization in domestic and laboratory mammals, barriers to II, hybrid sterility, 68
Iodine content of milk, as an estimate of the dietary iodine status of sheep, 374

Lactation, sources of variation in milk flow rate and its relationships with milk yield, milk composition, age and stage of, in dairy cows, 90
Lambs, behaviour on first day after birth, 152
Leptospira antibodies, comparative study of use of whey and serum for microscopic agglutination test for detection of, 621
Liver biotin and palmitoleic acid levels in fatty liver and kidney syndrome of chickens, 86

Mandibular cheek teeth, visual and radiographic examination of, and their relationship to age in a group of Aberdeen Angus x Friesian steers, 9

Mastitis in Friesian cows, relationship between teat shape, production and, 389
Mastitis, mechanisms of staphylococcal virulence in relation to bovine, 229
Metastrongyloid infections, pulmonary pathology associated with, 595
Metritis, and IBR virus, at parturition in the bovine Belgian Blue White breed, 178
Microbiological isolation of calves, simplified apparatus for, 642
Milk and the control of infertility, progesterone assays of, 534
Milk in the diagnosis of pregnancy in domestic cattle, use of progesterone concentrations in plasma and, 497
Milk flow rate, sources of variation in, and its relationship with milk yield, milk composition, age and stage of lactation in dairy cows, 90
Milk iodine content as an estimate of dietary iodine status of sheep, 374
Milk for pregnancy diagnosis in dairy cattle, factors affecting progesterone in, 487
Milk production and weight changes of the suckler cow and on growth of calf, effect of level of feeding and of single versus double suckling on, 576
Milk progesterone concentration and milk yield, fat and total nitrogen content, relationship between, 477
Milk, progesterone concentration, pregnancy diagnosis in the cow from, 445
Milk progesterone as a parameter for fertility control in cattle in Germany, 469
Milk progesterone radioimmunoassay in the diagnosis and treatment of subfertility in dairy cows, use of, 507
Milk test, clinical application of the progesterone-in-, 538
Mycoplasma sub-species *mycoides*, cultural and serological study of cattle vaccinated twice with, 187

Necrotic hepatitis, infectious. of sheep; an epidimiology survey on Welsh farms, 221
Neonatal calf diarrhoea IV, serum and faecal immune globulins in neonatal salmonellosis, 39
Neonatal calf diarrhoea V, water balances in calves with mixed infections, 127
Neonatal calf diarrhoea VI, serum and faecal immune globulins in calves with mixed infections, 252
Neuromuscular junction in the intact horse, a technique for investigation of the action of drugs on, 226
Nutrional deficiency in a group of calves, complex, 557

Oesophagostomum spp. and *Hyostrongylus rubidus* larvae, the effect of oral cambendazole against 10-day-old, in experimentally infected pigs, 105

Palmitoleic acid and liver biotin levels in the fatty liver and kidney syndrome of chickens, 86
Pancreatic necrosis, infectious pathology of II, stress-mediated recurrence in rainbow trout, 209
Parasites, intestinal, of the red fox in South West Wales, 309
Parturition, IBR virus and occurrence of metritis, in the bovine Belgian Blue White breed, 178
Pathology of infectious pancreatic necrosis I, sequential histopathology of the naturally occuring condition, 81
Pigs:
- accuracy of pregnancy diagnosis in a newly developed ultrasonic A-scan tester, 66
- age related changes in body water distribution of neonatal, 259
- carriage of beta-haemolytic streptococci by healthy, 276
- diseased, serological classification of streptococci isolated from, 163
- effect of oral cambendazole against 10-day-old *Hyostrongylus rubidus* and *oesophagostomum* spp. larvae in experimentally infected, 105
- prospects and problems of pregnancy and fertility diagnosis by aid of progesterone determination, 543
- rapeseed meal as a protein supplement in the diet of growing and fattening, 380

Plasma and milk in the diagnosis of pregnancy in domestic cattle, use of progesterone concentrations in, 497
Plasma corticoid levels in healthy and diarrhoeic calves from birth to 20 days of age, 551
Pox in giant ant-eaters due to agent similar to cow pox virus, 182
Pregnancy and fertility diagnosis in the pig by aid of progesterone determination, prospects and problems of, 543
Pregnancy diagnosis, accuracy of porcine, by a newly developed ultrasonic A-scan tester, 66
Pregnancy diagnosis in dairy cattle, factors affecting progesterone in milk for, 487
Pregnancy diagnosis in the cow from milk progesterone concentration, 445
Pregnancy diagnosis, statistical aspects of, 465
Pregnancy in domestic cattle, use of progesterone concentrations in plasma and milk in the diagnosis of, 497
Pregnancy (non-), early diagnosis in cattle: a commercial service, 529
Pregnancy testing in cows, the establishment and operation of a central laboratory for, 518
Preputial secretions of a vaccinated bull, nature of *Campylobacter fetus*—antibodies in, 615
Progesterone assays of milk and the control of infertility, 534
Progesterone concentration and milk yield, fat and total nitrogen content, relationship between, 477
Progesterone concentrations in plasma and milk in the diagnosis of pregnancy in domestic cattle, use of, 497
Progesterone concentration, pregnancy diagnosis in the cow from milk, 445
Progesterone determination, prospects and problems of pregnancy and fertility diagnosis in the pig by aid of, 543
Progesterone in milk for pregnancy diagnosis in dairy cattle, factors affecting, 487
Progesterone-in-milk test, clinical application of, 538
Progesterone milk, as a parameter for fertility control in cattle in Germany, 469
Progesterone radioimmunoassay in the diagnosis and treatment of subfertility in dairy cows, the use of milk, 507
Protein supplement, rapeseed meal as a, in the diet of growing and fattening pigs, 380
Pulmonary pathology associated with metastrongyloid infections, 595

Radiographic, and visual, examination of mandibular cheek teeth and their relationship to age in a group of Aberdeen Angus x Friesian steers, 9
Radiological studies on the developing feline skull, 354
Rapeseed meal as a protein supplement in the diet of growing and fattening pigs, 380
Red fox, intestinal parasites of the, in South West Wales, 309
Rhinotracheitis, comparison of methods for demonstrating antibodies to the virus of infectious bovine/infection pustular vulvovaginitis, 423
Rifampicin, determination of the *in vitro* sensitivity of *Brucella* strains to, 266

Salmonella, a survey of drug resistance in, isolated from animals in England and Wales during 1972, 95
Salmonella dublin abortion in cattle, experimental study of, 60
Salmonella dublin, the effect of fasciolíasis on susceptibility of cattle to, 119
Salmonella infection and contamination of veal calves, a slaughterhouse survey, 192
Salmonellas in cattle slurry, effect of temperature, solids content and pH on survival of, 284
Salmonellosis and fasciolíasis in African elephants in captivity, 313
Salmonellosis, neonatal, serum and faecal immune globulins in, neonatal calf diarrhoea IV, 39
Selenium concentration, glutathione peroxidase activity in bovine and ovine erythrocytes in relation to blood, 428
Serological classification of streptococci isolated from diseased pigs, 163
Serum and whey for microscopic agglutination test for detection of leptospira antibodies, comparative study of use of, 621
Sheep:
- biochemical aspects of cobalt deficiency in, with special reference to vitamin status and a possible involvement in the aetiology of cerebrocortical necrosis, 294
- *Brucella abortus* infection in, I, 18
- *Brucella abortus* infection in, II, experimental infection of ewes, 143
- experimental Border Disease, dose-response effect, 202
- fasciolíasis, effects on fertility, 568
- glutathione peroxisade activity in bovine and ovine erythrocytes in relation to blood selenium concentration, 428
- infectious necrotic hepatatis, an epidemiology survey on Welsh farms, 221
- milk iodine content as an estimate of the dietary iodine status of 374

Slurry, effect of temperature, solids content and pH on the survival of salmonellas in cattle, 284
Small intestine infusion studies in the calf, 215
Solanum malacoxylon, cattle poisoned by, systemic connective tissue calcification, a histological study, 28
Somatic cell counts, *Streptococcus agalactiae* in the smaller herd, incidence in relationship to, 588
Staphylococcal virulence, mechanisms of, in relation to bovine mastitis, 229
Streptococci, beta-haemolytic, carriage by healthy pigs, 276
Streptococci, serological classification of, isolated from diseased pigs, 163
Streptococcus agalactiae in the smaller herd, incidence in relationship to somatic cell counts, 588
Stress-mediated recurrence II, pathology of infectious pancreatic necrosis in rainbow trout, 209
Sudan, *Dermatophilus congolensis*, bacteriological, *in vitro* antibioic sensitivity and histopathological study of natural infection in cattle, 627
Survival, some biological factors affecting, with particular relation to farm animals, 335

Teat shape, relationship between, production and mastitis in Friesian cows, 389
Theileria annulata, control of infection in Egyptian cattle used for testing rindepest vaccine, application of imidocarb diproprionate, 363
Theileria sergenti, serological response to the indirect fluorescent antibody test of cattle infected with, 112
Trout, rainbow, pathology of infectious pancreatic necrosis II, stress-mediated recurrence, 209

Udder secretion, dry, binding of antibiotics to, and to udder tissue homogenates, 318

Ultrasonic A-scan tester, accuracy of porcine pregnancy diagnosis by, 66
Urinary tract infections in the dog, review of the aetiology and consequences of, 632

Veterinary practice, a view of specialization within, 346
Visual and radiographic examination of mandibular cheek teeth and their relationship to age in a group of Aberdeen Angus x Friesian steers, 9
Vitamin status, biochemical aspects of cobalt deficiency in sheep with special reference to, and a possible involvement in the aetiology of cerebrocortical necrosis, 294
Vulvovaginitis, comparison of methods for demonstrating antibodies to the virus of infectious bovine rhinotracheitis/infectious pustular, 423

Water balances in calves with mixed infections, neonatal calf diarrhoea V, 127
Water distribution of neonatal pigs, age related changes in body, 259
Welsh farms, epidemiology survey, infectious necrotic hepatitis of sheep, 221
Whey and serum for microscopic agglutination test for detection of leptospira antibodies, comparative study of use of, 621